

PATENT COOPERATION TREATY



PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference PALGE03931	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/KR2003/002055	International filing date (day/month/year) 06 OCTOBER 2003 (06.10.2003)	Priority date (day/month/year) 20 DECEMBER 2002 (20.12.2002)
International Patent Classification (IPC) or national classification and IPC IPC7 H02K 41/025, H02P 7/01, F04B 49/06, F25B 1/02		
Applicant LG ELECTRONICS INC. et al		

1.	This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2.	<p>This REPORT consists of a total of <u>3</u> sheets, including this cover sheet.</p> <p><input type="checkbox"/> This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).</p> <p>These annexes consist of a total of _____ sheets.</p>
3.	<p>This report contains indications relating to the following items:</p> <p>I <input checked="" type="checkbox"/> Basis of the report</p> <p>II <input type="checkbox"/> Priority</p> <p>III <input type="checkbox"/> Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p>IV <input type="checkbox"/> Lack of unity of invention</p> <p>V <input checked="" type="checkbox"/> Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p>VI <input type="checkbox"/> Certain documents cited</p> <p>VII <input type="checkbox"/> Certain defects in the international application</p> <p>VIII <input type="checkbox"/> Certain observations on the international application</p>

Date of submission of the demand 29 JUNE 2004 (29.06.2004)	Date of completion of this report 12 APRIL 2005 (12.04.2005)
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INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/KR2003/002055

I. Basis of the report

1. With regard to the elements of the international application:*

- ☒ the international application as originally filed
- ☐ the description:
pages _____, as originally filed
pages _____, filed with the demand
pages _____, filed with the letter of _____
- ☐ the claims:
pages _____, as originally filed
pages _____, as amended (together with any statement) under Article 19
pages _____, filed with the demand
pages _____, filed with the letter of _____
- ☐ the drawings:
pages _____, as originally filed
pages _____, filed with the demand
pages _____, filed with the letter of _____
- ☐ the sequence listing part of the description:
pages _____, as originally filed
pages _____, filed with the demand
pages _____, filed with the letter of _____

2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language _____ which is

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rules 55.2 and/or 55.3).

3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets _____

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this opinion as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17).

** Any replacement sheet containing such amendments must be referred to under item I and annexed to this report.

INTERNATIONAL PRELIMINARY EXAMINATION

International application No.

PCT/KR2003/002055

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1-10	YES
	Claims	None	NO
Inventive step (IS)	Claims	None	YES
	Claims	1-10	NO
Industrial applicability (IA)	Claims	1-10	YES
	Claims	None	NO

2. Citations and explanations (Rule 70.7)

Reference is made to the following documents:

D1: US 4332528

D2: JP8-303920

Novelty

Neither D1 nor D2 describes a control unit for generating a control signal for selecting a main winding coil of a linear motor of a compressor or an auxiliary winding coil on the basis of load capacity.

Claims 1-10 are new and the said claimed inventions are novel since the said control unit can't be anticipated by the prior art. Consequently claims 1-10 comply with Article 33(2) PCT.

Inventive step

For claims 1 and 8: Neither D1 nor D2 describes the said control unit in this invention but D1 describes a pressure sensitive switch which is arranged to connect or disconnect the additional field winding from the main field winding in response to a predetermined pressure level in the housing and controls the switching arm. So claim 1 would be obvious to a skilled person and the invention of claim 1 is not considered to involve an inventive step. Consequently claim 1 do not fulfil the requirements of Article 33(3) PCT. The same reasoning applies to Claim 8, too.

For claim 2: Although it is not explicitly specified in D1 and D2 that the said control unit generates the control signal when a voltage applied to the linear motor is varied, it could be derived by a person skilled in the art, if necessary, by a simple design change or repeated experiments, when to generate a control signal. So claim 1 would be obvious to a skilled person and the invention of claim 2 is not considered to involve an inventive step, either. Therefore, claim 2 does not fulfil the requirements of Article 33(3) PCT.

For claims 3-5, 9 and 10: Although it is not explicitly described in D1 and D2 that the load capacitor is determined based on inside temperature of the refrigerator or ambient temperature, D2 describes a control device of a refrigerator which controls the operation and stoppage of a compressor by a set temperature internal of a temperature detector in a refrigerating chamber. So claim 3 would be obvious to a skilled person by the combination of D1 and D2, so the invention of claim 3 is not considered to involve an inventive step. In conclusion, claim 3 does not fulfil the requirements of Article 33(3) PCT, but claims 2-13 comply with Article 33(3) PCT. The same reasoning applies to the Claims 4,5,9 and 10.

Industrial applicability

Claims 1-13 fulfil the requirements of Article 33(4) PCT.